



11 May 2020

Ms Genevieve Lucas
Department of Planning, Industry and Environment
320 Pitt Street
SYDNEY NSW 2001

Sent by email to:
genevieve.lucas@planning.nsw.gov.au

Dear Genevieve,

Re: Brandy Hill Expansion Project (SSD 5899) – Draft Conditions

Thank you for taking the time to discuss the operating hours for the proposed Brandy Hill Quarry Expansion Project. It is acknowledged that the subject of the operating hours has been contentious since this Project was first proposed, for a variety of reasons. What started in the Environmental Impact Statement as a broad consideration of the hours required for the operation, has progressively been refined in consultation with the community, Port Stephens Council and the Department. In summary, Hanson considers that the operating hours as proposed by the Department are reasonable, excluding the limitations on secondary and tertiary processing. While it is accepted that this activity would not occur in the period from 10:00pm to 5:00am, continuity of the current operating hours is requested regarding secondary and tertiary crushing in the evening period (6:00pm to 10:00pm).

Hanson's preference is that secondary and tertiary operating hours in the evening period be limited to Monday to Friday 6:00am to 8:00pm with operating hours permissible until 10:00pm on no more than 20 days per calendar year, coincident with permitted loading and despatch until 10:00pm.

We have previously presented concerns regarding the capacity of the secondary and tertiary processing circuit compared to the primary crusher and the subsequent need for this circuit to operate for longer to maintain processing flow. Further to this, Hanson has undertaken a detailed review of specific product demand and capacity under the proposed restriction to evening period secondary and tertiary processing activities (only to occur on 20 nights per calendar year). The outcome of this review has highlighted that the Quarry's capacity to produce 7mm product often cannot meet demand under existing operating conditions, which are currently generally restricted to 6:00am to 10:00pm weekdays. This would then present a significant constraint for the proposed Project at the operating hours proposed by the Department.

A summary of the demand and constraints relating to the production of 7mm product at the Brandy Hill Quarry is provided as follows.

- The 7mm product is an important grading for asphalt production and road sealing work by civil contractors and local councils as well as for concrete batching.
- Asphalt quality 7mm product is not easily replaced, with the quality being key to this restriction. It cannot be supplied by all quarries due to the nature of their reserves with those capable of supply likely to have their own limitations (that is, they are likely to already be at capacity).

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- For any Quarry production of 7mm and 10mm gradings are a limitation given these gradings sit in between 20mm and dust with screening activities needing to draw these grades out progressively.
- Sales of 7mm product at the Brandy Hill Quarry are currently 15% to 20% of total demand.
- Production of 7mm product has a current yield of approximately 10% of throughput. Based on a maximum capacity of 330t/hour for the secondary and tertiary production, this equates to 33t/hour. However, this is at maximum capacity and often falls to 25t/hour during road base production which requires a slower process rate to produce material that meets specifications.
- It is not feasible to completely upgrade or reconfigure just one component of the circuit.
- Upgrade of the entire circuit to increase throughput has marginal benefit when compared to the likely cost. This level of upgrade is not considered reasonable in the circumstances.
- Furthermore, any upgrade would quickly be taken up by existing demand. If Hanson considered that sales alone were sufficient to drive these upgrades they would have been implemented purely from a business perspective.
- Future demand for 7mm product is closely tied to Hanson's capacity to supply larger or a greater number of projects at a production rate of 1.5Mtpa. It would be expected that demand for this grading would increase proportionally.

The difference between a 10% yield and up to 20% demand has been the driver of extended operating hours for the secondary and tertiary processing operations to date. Already in 2020, the normal operating hours to 10:00pm of the secondary and tertiary equipment have been required on 60 evenings. It is notable that Hanson has not received any complaints about these evening operations. This demand has been driven principally for 7mm product.

By way of providing a more definitive example, in 2019 Hanson's sales of 7mm was 60,0072t, which is equal to 18,184 crushing hours. Based on a 16-hour crushing day this is equal to crushing until 10pm for 113 days out of the year. If we are conservative and consider yield at 25t/hour this equates to 150 days out of the year. Furthermore, this assumes 100% availability of the plant which isn't the case as the equipment is subject to breakdowns or maintenance. Historical availability is 86% which indicates that Hanson would need to operate until 10:00pm between 131 to 174 days per year depending on the mode. This is out of a total of 312 operating days (assuming 6 days a week over 52 weeks and not accounting for public holidays).

Upgrades to specific components of the circuit have been made over time such as changes to crusher liners, screening media and product gradings. The increased production rate is improved but only marginally. Further changes are likely to have diminishing returns. A significant capital upgrade is likely cost several million dollars and result in an estimated 5% increase in yield or an additional 180t over a 12-hour day (6am to 6pm). Therefore, the potential for upgrade of the secondary and tertiary processing circuit is not a reasonable measure given:

- the high cost of undertaking such an upgrade;
- the marginal benefit in terms of outcome;
- the potential for impact from evening operations from this equipment; and
- the demand for 7mm is sufficiently high that any upgrade would not achieve a reduction in hours required, as intended.

It is commonly understood by those involved in the quarrying industry that it is the primary crushing equipment that is the source of nuisance noise while secondary and tertiary processing is a key contributor to dust levels. Hanson are comfortable with the proposed limitations on operating hours for the primary crushing activities. Nuisance is to some extent subjective, however the guidelines used for assessment provide industry with a reasonable indication of what is acceptable. The EPA guidelines (both of which were considered for this assessment) present reasonable expectations for development across NSW and provide for amenity while not overly limiting development.

An aspect of the production process that is often overlooked is downtime for maintenance. While not a significant component of assessment it does influence the productive capacity of the operation. Hanson plans maintenance for all its operation to ensure equipment is running efficiently. Flexibility in evening operating hours for this equipment would also permit more maintenance to be carried out during daytime hours which is a much safer and more efficient outcome for the operation.

We are confident that the noise generated by secondary and tertiary processing alone would not be intrusive during the evening period, and especially not up to 8:00pm when most people are still active. This is demonstrated in the outcomes of assessment that were based on a lot more equipment operating during this period. Discussion of evening operating hours is then a conceptual matter, related to awareness that the Quarry would be operating, rather than direct impact of the noise generated. Consultation with the community has been aimed at education but also listening to feedback and refining the Project so that what is presented is acceptable to the majority of the community and Hanson. Our impression is that a lot of ground has been made in gaining community acceptance of the proposed operation, with operating hours now significantly reduced further from what was last presented to the community.

While the Department's caution in setting a precedent is acknowledged, this argument may also be reversed as it may be overly limiting development that is necessary to meet the needs of the local and regional community as well as demand from Sydney. By restricting these operations unreasonably, product must be sought from further away with increasing transportation costs, especially for hard rock aggregates. Keeping transportation costs low will be important to secure cost-effective construction for private operators but also for publicly funded infrastructure development, which is ultimately passed on to the consumer.

The Department's consideration of this matter is appreciated. Limiting the operating hours for the secondary and tertiary processing operations on the assumption that a capital upgrade by Hanson would be a feasible option is not considered reasonable under the circumstances. It is worth bearing in mind that Hanson originally envisaged a 24-hour operation with technical assessment and consultation leading to refinement of the Project to a level that we feel would be acceptable to the community and is realistic for the operation.

Should you have any questions on the above, please don't hesitate to contact myself, Andrew Driver or Belinda Pignone.

Yours sincerely



Nick Warren
Principal Environmental Consultant

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